Remarks

Claims 1-20 are currently pending in the patent application. For the reasons and arguments set forth below, Applicant respectfully submits that the claimed invention is allowable over the cited references.

The Office Action dated April 3, 2008 indicated the following rejections: claims 1-2 stand rejected under 35 U.S.C. § 102(e) over the Smith reference (U.S. Patent No. 6,512,472); claims 3-4 stand rejected under 35 U.S.C. § 103(a) over the Smith reference in view of the Abbey reference (U. S. Patent No. 6,151,354) and the Van Bezooijen reference (U.S. Patent No. 7.233,631); claims 5-6 stand rejected under 35 U.S.C. § 103(a) over the Smith reference in view of the Shi reference (U.S. Patent Pub. 2005/0079842); claims 7-9 stand rejected under 35 U.S.C. § 103(a) over the Smith reference in view of the Shi reference and further in view of the Walker reference (U.S. Patent Pub. 2005/0208919); claim 10 stands rejected under 35 U.S.C. § 103(a) over the Takatz reference (U.S. Patent No. 7,046,749) in view of the Hughes '676 reference (U.S. Patent Pub. 2003/0207676) and the Shi reference; claim 11 stands rejected under 35 U.S.C. § 103(a) over the Takatz reference in view of the Hughes '676, Shi, Abbey and Van Bezooijen references; claim 12 stands rejected under 35 U.S.C. § 103(a) over the Takatz reference in view of the Shi and Walker references; claims 13-14 stand rejected under 35 U.S.C. § 103(a) over the Takatz referemce in view of the Shi, Walker and Husted (U.S. Patent Pub. 2003/0012313) references; claims 15-17 and 20 stand rejected under 35 U.S.C. § 103(a) over the Shi reference in view of the Takatz reference; claim 18 stands rejected under 35 U.S.C. § 103(a) over the Shi reference in view of the Takatz reference and the Ciccarelli reference (U. S. Patent No 6,498,926); claim 19 stands rejected under 35 U.S.C. § 103(a) over the Shi reference in view of the Takatz, Ciccarelli and Hughes '674 (U.S. Patent Pub. 2003/0207,674) references.

Applicant respectfully submits that the § 102(e) rejection of claims 1-2 cannot stand because the cited portions of the Smith '472 reference do not correspond to the claimed invention which includes, for example, aspects directed to obtaining a wideband signal power estimate of total signal power reaching the analog-to-digital converter (ADC). The cited portions of Smith '472 teach measuring a signal level of a number of individual bins rather than estimating the total signal power. *See, e.g.,* col. 5, lines 1-7.

Moreover, the Smith '472 reference specifically teaches that measuring the power of these bins has certain alleged advantages. *See, e.g.,* Col. 7 line 31 *et seq*. As such, Applicant respectfully submits that the Examiner's rejection fails to show how the Smith '472 teaches obtaining and using an estimate of the total signal power reaching the analog-to-digital converter. Rather than obtaining and using an estimate of the total signal power, the relied upon portions of Smith '472 teach that the output of the ADC should be separated into different bins, such as, P_a, P_o or $P_{+/-}$. As such, the cited portions fail to teach a signal that represents an estimate of the total signal power. Accordingly, the §102(e) rejection of claims 1-2 cannot stand and Applicant requests that it be withdrawn.

Applicant respectfully submits that the § 103(a) rejections of claims 3-9 (each of which is based upon the Smith '472 reference) cannot stand because the cited portions of Smith '472 do not correspond to the claimed invention as discussed above in relation to the § 102(e) rejection of claim 1. Applicant submits that the additions of the Shi, Walker, Abbey and/or Van Bezooijen references do not cure any of the above mentioned deficiencies. In at least this regard, the § 103(a) rejections of claims 3-9 are improper because claims 3-9 depend from claim 1. Accordingly, Applicant requests that the § 103(a) rejections of claims 3-9 be withdrawn.

Applicant respectfully traverses the § 103(a) rejections of claims 10-14 (each of which is based upon Takatz in view of Shi) because the Office Action has provided no evidence of motivation to modify the Takatz reference. This approach is contrary to the requirements of § 103 and relevant law. *See, e.g., KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (U.S. 2007)

> Although common sense directs one to look with care at a patent application that claims as innovation the combination of two known devices according to their established functions, it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. This is so because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known.

In this instance, the Office Action erroneously asserts that one of skill in the art would modify the Takatz reference with the cited portions of the Shi reference in order that

the receiver could avoid the intermodulation interference. However, the Office Action fails to establish that the Takatz reference suffers from intermodulation interference. Applicant appreciates the Examiner's clarification in which the Examiner alleges that the Takatz reference would suffer from "interfering harmonics from the clipping effect." Applicant respectfully submits that even if such interfering harmonics existed and were taught by Takatz, such harmonics are not intermodulation interference. More specifically, the Shi reference teaches that the intermodulation interference occurs in a mixer (*e.g.,* mixer 212 of Figure 2) when the mixer receives two or more strong RF interference signals at certain neighboring channels which causes the mixer to produce intermodulation components at the same frequency as the desired signal. *See, e.g.,* Paragraph 0008. Thus, the skilled artisan would not look to teachings specifically designed for intermodulation interference occurring in a mixer to fix such clipping effects. As clarified by the Examiner's identification of the clipping effect, the cited portions of the Takatz reference do not show any corresponding mixer that produces intermodulation components. *See, e.g.,* Figure 1. Thus, the Examiner's statement that the relied upon portions of Shi are an "upgrade" is unsupported and conclusory.

Moreover, the Takatz reference already provides for automatic gain control and compensating for out-of-band signal components. *See, e.g.,* Figure 1 and Col. 2:35-61. Thus, Applicant submits that the skilled artisan would not have reasonably looked to Shi to address problems that are already addressed by Takatz. The Office Action fails to present a valid reason why one of skill in the art would modify Takatz in the proposed manner. Applicant further submits that, in the absence of a valid reason for the proposed modification of Takatz, the Office Action appears to be improperly resorting to hindsight reconstruction based upon Applicant's disclosure in an attempt to arrive at a combination that corresponds to the claimed invention. *See, e.g.,* M.P.E.P. § 2142. Specifically, the Office Action appears to have simply indentified elements and attempted to arrange these elements in the manner taught by Applicant's specification.

In addition, it is unclear how the Office Action is proposing to combine the cited teachings of the Takatz, Hughes '676 and Shi references. The Office Action proposes to combine teachings of Shi relating to controlling the gain of LNA 210 with Takatz and Hughes '676; however, Takatz already provides for the automatic gain control of

amplifier 12. Thus, the Office Action appears to be attempting to modify Takatz to have two separate gain-control systems which each control the gain of amplifier 12 in different manners. Applicant submits that such a combination would be illogical to the skilled artisan and would not result in an operable embodiment. *See, e.g.,* M.P.E.P. § 2143.01 (if a "proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification"); *see also In re Gordon*, 733 F.2d 900 (Fed. Cir. 1984).

In view of the above, the Office Action has not provided any evidence as to why one of skill in the art would find the asserted combination obvious as required. Accordingly, the § 103(a) rejections of claims 10-14 are improper and Applicant requests that they be withdrawn.

Applicant respectfully submits that the § 103(a) rejections of claims 15-20 (each of which is based upon the Shi '842 reference) cannot stand because the cited portions of Shi '842 do not correspond to the claimed invention which includes, for example, aspects directed to automatic gain control circuitry configured to receive a wide-band signal power estimate obtained by measuring a signal between an analog-to-digital converter (ADC) and digital selectivity circuitry in a baseband processor. The Examiner erroneously asserts that signal Rssi_A is a power estimate obtained from a signal between the ADC and the digital selectivity circuitry, but fails to address the limitations directed to the selective circuitry being part of a baseband processor. This signal is, however, not obtained between an ADC and digital selectivity circuitry as it is shown to be obtained at a point prior to the ADC. Applicant respectfully submits that the Examiner's addition of a digital baseband processor from the Takatz reference would not result in the power estimate of the Rssi_A signal being obtained between the added baseband processor and the ADC nor does the alleged combination of any other references cure this deficiency. Accordingly, the rejection is improper for failing to show correspondence to limitations directed to a wide-band signal power estimate obtained by measuring a signal between the analog-to-digital converter and the selectivity circuitry in a baseband processor. Applicant respectfully requests that the rejections be withdrawn.

In view of the remarks above, Applicant believes that each of the rejections has been overcome and the application is in condition for allowance. Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is asked to contact the agent overseeing the application file, Peter Zawilski, of NXP Corporation at (408) 474-9063 (or the undersigned).

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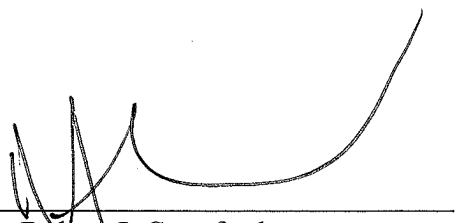
By: 
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